

Exhibit A

DOCKET NO: 302527US91

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
MORTON M. MOWER : EXAMINER: KAHELIN, M.W.
SERIAL NO: 10/656,222 :
FILED: SEPTEMBER 8, 2003 : GROUP ART UNIT: 3762
FOR: METHOD AND APPARATUS FOR :
INTRACHAMBER
RESYNCHRONIZATION

DECLARATION UNDER 37 C.F.R. §1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Dr. Morton. M. Mower M.D. declares:

1. I have received a medical doctorate (MD) degree from the University of Maryland Medical School, and a Bachelor of Arts (BA) degree from Johns Hopkins University. My area of particular expertise is Cardiology and Electrophysiology.
2. My current position is Associate Professor of Medicine at the Johns Hopkins University School of Medicine, and Professor of Physiology and Biophysics at Howard University College of Medicine.
3. I have been widely recognized in the field of Cardiology and Electrophysiology, including:
 - a. The Space Technology Hall of Fame Recognition Award.
 - b. The Michel Mirowski Award of Excellence in the Field of Clinical Cardiology and Electrophysiology.

- c. The Medical Alley Award for Outstanding Contribution in Research and Development.
- d. The NASPE President's Award.
- e. The University of Maryland School of Medicine Alumni Association Honor Award & Gold Key for Outstanding Contributions to Medicine and Distinguished Service to Mankind.
- f. The Distinguished Alumnus Award of the Johns Hopkins University.
- g. Career Achievement Award from Chiang Mai University.
- h. Inductee of the National Inventors Hall of Fame.

4. I am the named inventor of the above-captioned patent application, and I am the named inventor on 37 U.S. patents, also with numerous foreign counterparts.

5. My contributions to the medical literature include about 350 articles.

6. I have thoroughly reviewed the above-identified patent application, including the claims submitted together with this declaration.

7. I have thoroughly reviewed the Office Action of January 12, 2011.

8. I have thoroughly reviewed the rejections applied to the currently pending claims, including the rejection of the claims under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement and lacking enablement.

9. Based upon my review of these materials and my background and experience in the field of Cardiology and Electrophysiology, I am of the following opinions:

10. The Office Action on page 2 asserts that the particular type of the electrode and its placement in the interventricular septum is not described in a manner that conveys to one of ordinary skill in the art that the inventor had possession of the claimed subject matter at the time of the invention.

11. On page 3, the Office Action further asserts that the above-identified application does not describe placement of an electrode to stimulate only a left ventricle in sufficient detail to allow one of ordinary skill in the art to practice the invention.

12. Paragraphs 57-58 and Fig. 4 of the above-identified application describes pacing of only the left ventricle and placement of an electrode in the interventricular septum to stimulate the left ventricle. For example, descriptions of a placing a screw-type electrode in a lower portion of the septum towards the left ventricular wall are provided.

13. I believe that, at the time the invention was made, one of ordinary skill in the art would have had sufficient knowledge of the physiology of the interventricular septum of the heart in order to understand how to make and use the invention as claimed in light of at least the descriptions in paragraphs 57-58 and Fig. 4 of the specification as originally filed. I base this belief on the following publications demonstrating the level of skill in the art at the time of the invention.

14. Sodi-Pallares et al., Deductive and Polyparametric Electrocardiography, *Instituto Nacional de Cardiologia de Mexico* 1970, at page 23 describes an electrical barrier between the right septal mass and the left septal mass. Sodi-Pallares also describes at page 23 that there are regions where the left septal mass dominates and is “near or [reaches] the right septal surface.” This is also shown in Figs. 12, 20, 56, 60, 99, 108 and 110.

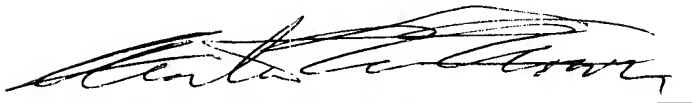
15. Fig. 4 of Armour et al., Functional Anatomy of the Interventricular Septum, *Cardiology* 1973, illustrates the thinness of the right ventricle septum relative to the left ventricle septum. The abstract of Armour also states that “based on careful dissection of fresh specimens, the interventricular septum was found to be comprised of thin right and relatively thick left muscle masses.”

16. An article I co-authored in 1967, Mower et al., Unusual Patterns of Conduction Produced by Pacemaker Stimuli, *American Heart Journal*, vol. 74(1):24-28,

shows that occasional right bundle branch block (RBBB) patterns are produced in an ECG when pacing from the right ventricle apex of the septum. This means that the impulse preferentially enters the left ventricular septum and then depolarizes the entire left ventricle mass. The right ventricle is activated late and from the left side.

17. Sodi-Palladares et al., New Bases of Electrocardiography, C.V. Mosby Co. 1956, states at page 377 that most of the thickness of the septum is due to the left ventricle, and that in certain areas the right septal surface is formed by the left ventricle.

18. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any patent issuing from this application.



Dr. Morton M. Mower M.D.

6/24/2011
Date